PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re **PATENT** application of:

Applicant:	Hartmut BOHNET *et al.*	
Serial No.:	10/560,456	Art Unit: 3677
Filed:	December 14, 2005	
Title:	**FIXING DEVICE FOR PRODUCING AN ACHORING IN PANELS, ESPECIALLY PANELS CONSISTING OF GLASS**	
Examiner:	Flemming Saether	
Docket No.:	FISCP0101US	

APPEAL BRIEF

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Sir:

This brief is submitted in connection with the appeal of the above-identified application. Credit card payment of the fee set forth in 37 C.F.R. § 41.20(b)(2) is made in connection herewith. If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 18-0988, our Docket No. FISCP0101US.

I. Real Party in Interest

The real party in interest in the present appeal is fischerwerke GmbH&Co. KG, assignee of the present application.

II. Related Appeals and Interferences

Appellants, Appellants' undersigned representative, and/or the assignee of the present application are unaware of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by, or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-11 and 13 are in the instant proceeding and are pending in the application. Claims 1-11 and 13 stand finally rejected and are the subject of this appeal. Claim 12 was previously canceled.

IV. Status of Amendments

Claim 1 was amended subsequent to the final rejections contained in the Final Office Action dated June 3, 2009. In particular, claim 1 was amended in response to an indefiniteness rejection pursuant to 35 U.S.C. § 112, second paragraph. The Examiner has entered the amendment and withdrawn the indefiniteness rejection. (See Advisory Action, Boxes 7 and 11.) No amendments have been made to the specification since the final rejections.

V. Summary of the Claimed Subject Matter

Independent claim 1 recites a fixing device anchored in an undercut drilled hole drilled only partially into an undercut portion of a panel (page 1, line 8; page 2, lines 7-16; page 3, lines 3-5 and 12-14; Fig. 1), the fixing device comprising:

an anchor bolt comprising fixing means for fixing the panel to a supporting structure (page 2, lines 33-33; page 2, line 35 to page 3, line 1), and an anchoring zone having a portion that widens in cross-section in a direction of insertion and in

correspondence with the undercut portion (page 2, lines 33-34; page 3, lines 5-7), and

a covering of a resilient plastics material that covers the anchoring zone (page 1, line 33 to page 2, line 5; page 3, lines 1-2) and has a thickness and resiliency such that when the fixing device is anchored within the undercut portion, the covering permits inclination of the anchor bolt relative to the undercut portion of about ten degrees in response to transverse forces (page 3, lines 7-10),

wherein an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole (page 2, line 30 to page 3, line 10; Fig. 1). (See generally Fig. 1 as to features of claim 1.)

Dependent claim 2 recites a fixing device according to claim 1, wherein a smallest outer diameter of the covering is smaller in diameter than the portion of the anchoring zone that widens in cross-section. (Page 2, lines 21-25; Fig. 1.)

Dependent claim 3 recites a fixing device according to claim 1, wherein the covering comprises a silicone-containing plastics material. (Page 2, lines 27-28; page 3, line 2.)

Dependent claim 4 recites a fixing device according to claim 1, wherein the covering consists of a silicone-containing plastics material. (Page 2, lines 27-28; page 3, line 2.)

Independent claim 5 recites a fixing arrangement comprising:

a panel having an undercut drilled hole extending only partially through the panel and comprising an undercut portion (page 1, line 8; page 2, lines 7-16; page 3, lines 3-5; Fig. 1); and

a fixing device anchored in the undercut portion (page 3, lines 12-14), the fixing device comprising an anchor bolt having fixing means for fixing the panel to a supporting structure (page 2, lines 33-33; page 2, line 35 to page 3, line 1) and an

anchoring zone having a portion that widens in cross-section in a direction of insertion and in correspondence with the undercut portion (page 2, lines 33-34; page 3, lines 5-7), and a covering of a resilient plastics material that covers the anchoring zone (page 1, line 33 to page 2, line 5; page 3, lines 1-2), wherein an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole (page 2, line 30 to page 3, line10; Fig. 1), and

wherein the covering has a thickness and resiliency such that the covering permits inclination of the anchor bolt relative to the undercut portion in response to transverse forces (page 3, lines 7-10). (See generally Fig. 1 as to features of claim 5.)

Dependent claim 6 recites a fixing arrangement according to claim 5, wherein a smallest outer diameter of the covering is smaller in diameter than the portion of the anchoring zone that widens in cross-section. (Page 2, lines 21-25; Fig. 1.)

Dependent claim 7 recites a fixing arrangement according to claim 5, wherein the covering comprises a silicone-containing plastics material. (Page 2, lines 27-28; page 3, line 2.)

Dependent claim 8 recites a fixing arrangement according to claim 5, wherein the covering consists of a silicone-containing plastics material. (Page 2, lines 27-28; page 3, line 2.)

Dependent claim 9 recites a fixing arrangement according to claim 5, wherein inclination of the anchor bolt of about 10 degrees relative to the undercut portion is enabled. (Page 3, lines 7-10.)

Dependent claim 10 recites a fixing arrangement according to claim 5, wherein the fixing device is anchored in the undercut portion by a curable compound. (Page 1, line 32; page 3, line 3; page 3, lines 12-15.)

Dependent claim 11 recites a fixing arrangement according to claim 5, wherein the panel is a glass panel. (Page 1, line 9; page 2, lines 10-14.)

Independent claim 13 recites a fixing arrangement comprising:

a panel having an undercut drilled hole extending only partially through the panel and comprising an undercut portion (page 1, line 8; page 2, lines 7-16; page 3, lines 3-5; Fig. 1); and

a fixing device anchored in the undercut portion (page 3, lines 12-14), the fixing device comprising an anchor bolt having fixing means for fixing the panel to a supporting structure (page 2, lines 33-33; page 2, line 35 to page 3, line 1) and an anchoring zone having a portion that widens in cross-section in a direction of insertion and in correspondence with the undercut portion (page 2, lines 33-34; page 3, lines 5-7), and a covering of a resilient plastics material that covers the anchoring zone (page 1, line 33 to page 2, line 5; page 3, lines 1-2),

wherein the covering has a thickness and resiliency such that the covering permits inclination of the anchor bolt relative to the undercut portion in response to transverse forces (page 3, lines 7-10); and

wherein the fixing device is anchored in the undercut portion by a curable compound (page 1, line 32; page 3, line 3; page 3, lines 12-15). (See generally Fig. 1 as to features of claim 13.)

VI. Grounds of Rejection to be Reviewed on Appeal

Claims 1-11 and 13 stand rejected pursuant to 35 U.S.C. § 103(a) as being obvious over Oberhofer et al., U.S. Patent No. 6,735,921 (Oberhofer) in view of Mallon, U.S. Patent No. 846,493 (Mallon).

VII. Argument

A. Overview of the Claimed Invention

The claimed invention is directed to a fixing device for producing an anchoring in an undercut portion of a panel, which addresses problems resulting from the very limited flexibility of the anchor bolt with respect to the undercut portion. The fixing device of the claimed invention addresses such problem by means of an anchor bolt surrounded in the region of the anchoring zone with a covering of resilient plastics material. This provides a fixing element in an undercut portion of a panel that exhibits resilience in all directions, and the resilience enables inclination of the anchor bolt of about ten degrees. (See, e.g., Application at page 1, line 21 to page 2, line 5; page 3, lines 9-10; Fig. 1).

Independent claims 1 and 5 further recite a specific dimensional relationship between the resilient material surrounding the anchoring zone of the anchor bolt and the undercut hole: "an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole." These features are apparent in the figure, as described in the application at page 2, line 30 to page 3, line 19. The sole figure in the application is reproduced below for convenience.

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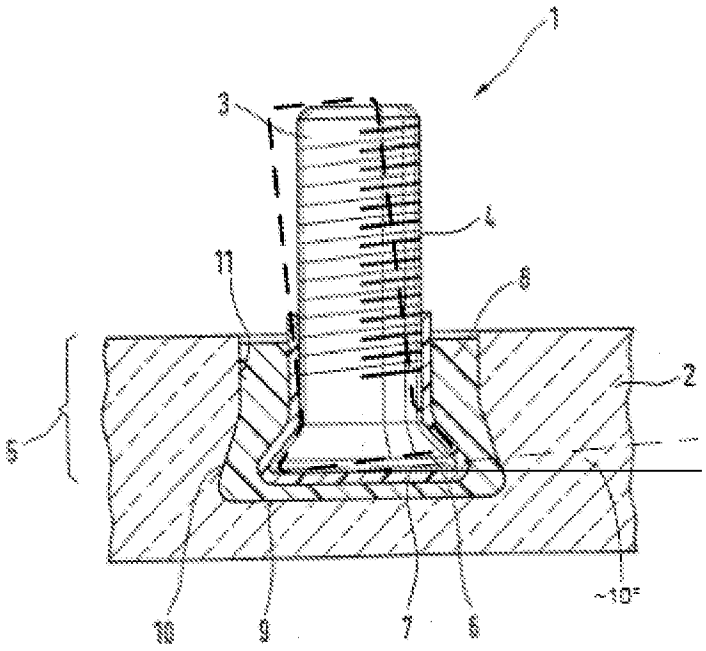


Current Application

Specifically, in the figure above it can be seen that the outermost cross-sectional dimension of the resilient material 7 is less than the innermost cross-sectional dimension of the undercut hole 9. This permits the fixing device to be placed within the undercut hole from the front of the panel such that during fabrication, the curable compound 8 (see claims 10 and 13) may be displaced and distributed around the resilient material of the fixing device. (See Application at page 3, lines 13-15.)

The references, whether considered individually or in combination, do not disclose or suggest a structure having such features in combination.

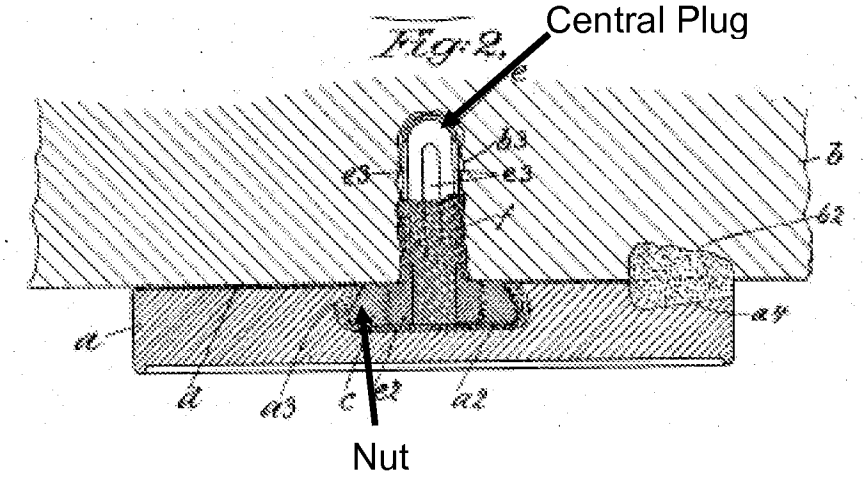
B. Analysis of Claim Rejections – 35 U.S.C. § 103(a)

All pending claims 1-11 and 13 stand rejected pursuant to 35 U.S.C. § 103(a) as being obvious over Oberhofer et al., U.S. Patent No. 6,735,921 (Oberhofer) in view of Mallon, U.S. Patent No. 846,493 (Mallon). Applicants traverse the rejections for at least

the following reasons.

1. The Claimed Dimensional Features Are Lacking In the References

As stated above, independent claims 1 and 5 recite in part that "an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole." The Examiner recognizes the device of Oberhofer lacks these features. (See Final Office Action at page 3.) The Examiner, however, states the claimed dimensional features are disclosed by Mallon and concludes it would have been obvious to modify the device of Oberhofer based on Mallon to arrive at the claimed invention. Applicants disagree with the Examiner's analysis of Mallon. Fig. 2 of Mallon is reproduced below for convenience.



Mallon

The Examiner states Mallon discloses an anchor bolt surrounded by a covering material "C" that has an outermost cross-section that is less than an innermost cross-section of the undercut hole. (See Fig. 2.) The Examiner, therefore, equates the covering material "C" to the claimed resilient material. The Examiner's interpretation of Mallon is incorrect insofar as the "covering material C" is actually a "nut C" that forms

part of the anchor bolt structure.

More specifically, in the device of Mallon, the purported anchor bolt includes ***central key plug "e"*** for protruding into a support structure, and a threaded ***nut "C"*** which widens in the direction of insertion in the undercut hole. (See Mallon at page, lines 60-62 and 78-85; Fig. 2.) Referring to claim 1, for example, the claimed invention includes an ***anchor bolt*** comprising a "***fixing means***" for fixing the panel to a support structure, and an "***anchoring zone***" which widens in the direction of insertion in the undercut hole. In both structure and function the claimed "fixing means" is analogous to the central key plug "e" of Mallon, and the claimed "anchoring zone" is analogous to the nut "C" of Mallon.

Accordingly, it is improper for the Examiner to interpret the nut "C" as a "covering material" analogous to the claimed resilient material. Indeed, the nut "C" is not resilient. In addition, viewing the nut "C" as comparable to the claimed anchoring zone, Mallon does not disclose or suggest any additional structure comparable to the resilient material having the claimed dimensional limitations.

The Examiner may view the nut "C" as a covering material because the central key plug "e" and nut "C" appear to be distinct structures that must be threaded together. In contrast, the claimed anchoring zone and fixing means are described in the current application as forming a unitary piece (the anchor bolt). This difference does not justify the interpretation afforded the nut "C" by the Examiner, given that the structure and function of nut "C" clearly are analogous to the claimed anchoring zone.

Furthermore, even if the nut "C" of Mallon were interpreted as being analogous to the claimed resilient material, Mallon still would be deficient. In such case, the device of Mallon would lack a structure analogous to the claimed anchoring zone. Generally, the claimed fixing device is a three-component structure (fixing means, anchoring zone, resilient material) further having the claimed dimensional features. Under any reasonable interpretation, the device of Mallon is a two-component structure, meaning at least one claimed component and its respective dimensional features are lacking.

For at least these reasons, Mallon does not disclose or suggest a structure having the dimensional features recited in independent claims 1 and 5. A combination of Oberhofer and Mallon, therefore, does not result in, disclose, or suggest the invention of claims 1 and 5 and the claims dependent thereon.

2. The Combination of the Curable Compound and Resilient Material Is Lacking In the References

Claims 10 and 13 recite that the fixing device is anchored in the undercut portion by a curable compound. At the outset, claim 10 depends from claim 5, and therefore also is patentable for at least the above reasons. The rejection of claim 10, therefore, should be withdrawn.

In addition, the features pertaining to the curable compound are patentable independent of the dimensional features analyzed above. The Examiner states one skilled in the art would have considered both Oberhofer and Mallon in determining how to mount a stud to a panel. Even if true, the references do not teach employing the combination of a resilient material as used in the device of Oberhofer, together with a hard material as disclosed in Mallon. Indeed, the two references teach away from each other. Mallon discloses providing a hard compound surrounding the anchoring bolt to provide a secured fixation. Oberhofer discloses providing a resilient material surrounding the anchoring bolt to provide flexibility to permit some movement of the panel.

In this vein, a combination of Mallon and Oberhofer does not result in, disclose, or suggest the claimed invention. Oberhofer discloses providing a resilient material around the anchoring zone of the bolt. Mallon discloses providing a hard cured material around the anchoring zone of the bolt. There is no disclosure or suggestion in the references, whether viewed individually or in combination, to provide a configuration by which a resilient material is provided around the anchoring zone of the bolt, and a curable material is provided around the resilient material.

Applicants add that in the device of Mallon, the curable compound prevents the

anchor bolt from pulling out of the panel. In the device of Oberhofer, additional bolt or plate structures provide that function. For example, Fig. 7 of Oberhofer, relied upon by the Examiner, depicts a second plate 1b, nut 7, and cover plate 13 to prevent the anchoring bolt from pulling out of the panel. One skilled in the art, therefore, would not employ a curable compound in the device of Oberhofer, insofar as the device of Oberhofer already has several structures that cooperate to perform the same function.

For at least these reasons, a combination of Oberhofer and Mallon does not disclose or suggest a structure having the claimed configuration of a resilient material in combination with a surrounding curable compound, as recited in claims 10 and 13. A combination of Oberhofer and Mallon, therefore, does not result in, disclose, or suggest the invention of claims 10 and 13.

C. Conclusion

For at least the foregoing reasons, claims 1-11 and 13 are not obvious over Oberhofer in view of Mallon. Appellants, therefore, respectfully request reversal of the Examiner's rejections of claims 1-11 and 13.

VII. Claims Appendix

An appendix containing a copy of the claims involved in this appeal is attached to this brief.

IX. Evidence Appendix

An evidence appendix is attached, but identifies no items of evidence.

X. Related Proceedings Appendix

A related proceedings appendix is attached, but identifies no decisions.

Respectfully submitted,

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CLAIMS APPENDIX

1. A fixing device anchored in an undercut drilled hole drilled only partially into an undercut portion of a panel, the fixing device comprising:

an anchor bolt comprising fixing means for fixing the panel to a supporting structure, and an anchoring zone having a portion that widens in cross-section in a direction of insertion and in correspondence with the undercut portion, and

a covering of a resilient plastics material that covers the anchoring zone and has a thickness and resiliency such that when the fixing device is anchored within the undercut portion, the covering permits inclination of the anchor bolt relative to the undercut portion of about ten degrees in response to transverse forces,

wherein an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole.

2. A fixing device according to claim 1, wherein a smallest outer diameter of the covering is smaller in diameter than the portion of the anchoring zone that widens in cross-section.

3. A fixing device according to claim 1, wherein the covering comprises a silicone-containing plastics material.

4. A fixing device according to claim 1, wherein the covering consists of a silicone-containing plastics material.

5. A fixing arrangement comprising:

a panel having an undercut drilled hole extending only partially through the panel and comprising an undercut portion; and

a fixing device anchored in the undercut portion, the fixing device comprising an anchor bolt having fixing means for fixing the panel to a supporting structure and an anchoring zone having a portion that widens in cross-section in a direction of insertion

and in correspondence with the undercut portion, and a covering of a resilient plastics material that covers the anchoring zone, wherein an outermost cross-sectional dimension of the resilient material is less than an innermost cross-sectional dimension of the undercut hole, and

wherein the covering has a thickness and resiliency such that the covering permits inclination of the anchor bolt relative to the undercut portion in response to transverse forces.

6. A fixing arrangement according to claim 5, wherein a smallest outer diameter of the covering is smaller in diameter than the portion of the anchoring zone that widens in cross-section.

7. A fixing arrangement according to claim 5, wherein the covering comprises a silicone-containing plastics material.

8. A fixing arrangement according to claim 5, wherein the covering consists of a silicone-containing plastics material.

9. A fixing arrangement according to claim 5, wherein inclination of the anchor bolt of about 10 degrees relative to the undercut portion is enabled.

10. A fixing arrangement according to claim 5, wherein the fixing device is anchored in the undercut portion by a curable compound.

11. A fixing arrangement according to claim 5, wherein the panel is a glass panel.

13 A fixing arrangement comprising:

a panel having an undercut drilled hole extending only partially through the panel

and comprising an undercut portion; and

a fixing device anchored in the undercut portion, the fixing device comprising an anchor bolt having fixing means for fixing the panel to a supporting structure and an anchoring zone having a portion that widens in cross-section in a direction of insertion and in correspondence with the undercut portion, and a covering of a resilient plastics material that covers the anchoring zone,

wherein the covering has a thickness and resiliency such that the covering permits inclination of the anchor bolt relative to the undercut portion in response to transverse forces; and

wherein the fixing device is anchored in the undercut portion by a curable compound.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.